

DOCUMENT RESUME

ED 153 953

SP 012 469

AUTHOR Field, Judd P.; Bradley, Earks T.
 TITLE Focused Observation and Feedback of Nonverbal Behavior.
 INSTITUTION Michigan State Univ., East Lansing. Div. of Student Teaching and Professional Development.
 NOTE 20p.
 EDRS PRICE MF-\$0.83 HC-\$1.67 Plus Postage.
 DESCRIPTORS Behavior Patterns; *Behavior Rating Scales; *Instrumentation; *Nonverbal Communication; *Teacher Behavior

ABSTRACT

A feedback and analysis instrument measuring nonverbal teacher behavior is presented which focuses on fourteen specific behaviors. Data obtained from the instrument may be analyzed for each of the behaviors and developed into a quantified ratio of those categories tending to signal positive influence by the teacher toward the pupil and those tending to signal negative influence by the teacher toward the pupil. The behaviors focused upon are: (1) frowning facial expressions; (2) smiling facial expressions; (3) sarcastic, negative, discouraging facial expressions; (4) positive, relaxing, or tension-breaking facial expressions; (5) eye movement; (6) eye contact; (7) shaking of the head in a back and forth motion; (8) nodding of the head in an up and down fashion; (9) avoidance; (10) approach; (11) distracting idiosyncrasies; (12) gestures tending to vary the stimuli, but of a nondistracting character; (13) nonverbal control; and (14) manipulating the environment or an object which tends to vary the stimuli. (MJE)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

ED153953

MICHIGAN STATE UNIVERSITY

APR 17 11 00 AM '78

FOCUSED OBSERVATION AND FEEDBACK
OF
NONVERBAL BEHAVIOR

BY

JUDD F. FIELD
and
BANKS T. BRADLEY

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

*Michigan St. Univ. Div.
of Student Teaching & Prof.*

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

EAST LANSING, MICHIGAN
February, 1978

Copyright, DIVISION OF STUDENT TEACHING
and
PROFESSIONAL DEVELOPMENT, 1978

SP012 469

Dr. Judd F. Field
Dr. Banks T. Bradley
253 Erickson Hall
Michigan State University
East Lansing, MI 48824

FOCUSED OBSERVATION AND FEEDBACK
OF
NONVERBAL BEHAVIOR

INTRODUCTION

The instrument described herein is but one small step toward further understanding the complex nature of teaching behavior in the classroom, the effect this behavior has upon pupils and, perhaps more importantly, the influence a teacher's verbal and nonverbal behavior may have upon the learning environment within a given classroom.

At the present time, there is no instrumentation developed which will provide complete feedback relative to the hundreds--perhaps thousands--of expressions or body signals humans are capable of making. Indeed, it may well be an impossible task. Taking this into consideration, the present instrument deals with only 14 nonverbal behaviors, that is, it is a focused observation instrument.

STATEMENT OF THE PROBLEM

Language is a necessary commodity for teachers in all situations to convey concepts to students. The components of language include verbal, nonverbal and printed materials. Verbal behavior has been subjected to extensive study. These studies have established that verbal behavior does influence the social, emotional and psychological climate within the classroom. The study of verbal patterns continues to be of major concern to many researchers.

The study of verbal patterns continues to be of major concern to many researchers. Unfortunately, studies of teacher's nonverbal behavior patterns and influence in establishing the social, emotional and psychological climate have not been as extensively conducted. Yet, communication studies have clearly established the importance of nonverbal behavior in influencing human interaction patterns. The purpose of this project is to develop a systematic procedure for analyzing the nonverbal behavior patterns of teachers which should have national appeal to teacher educators.

An extensive bibliography relating to verbal/nonverbal analysis research has been developed. The process of developing the bibliography has clearly demonstrated the lack of sufficient research in nonverbal communication by teachers. Further, there has been little systematic effort to relate verbal/nonverbal communication together to determine the impact of teacher action on the instruction/learning process.

BASIC ASSUMPTIONS

The focused observation and feedback instrument is based upon several assumptions. Among these are:

1. That there exists a non-spoken, body language in a given culture which transmits meaning to others within that culture.
2. That this nonverbal "language" can be observed and classified.
3. That observers of teaching behavior can be trained to classify and measure nonverbals with accuracy and agreement.
4. That the utilization of a "language of non-language", that is, the use of symbols and abbreviations is less cumbersome, swifter and more specific than most conventional means of reporting nonverbal behavior.
5. That providing teachers with feedback relative to their nonverbal behavior with students should facilitate a more positive social, emotional and psychological climate of inter-personal interaction.

HISTORICAL BACKGROUND

The effort to develop a nonverbal analysis and feedback procedure results from previous work relative to the analysis of verbal behavior of classroom teachers. A preliminary instrument was developed in 1975. This instrument provided the basis for a pilot study with student teachers during the 1976-77 academic year. A revised instrument has been developed for study during 1977-78. Upon completion of a comparative study with student teachers, a teaching module dealing with the analysis and feedback of nonverbal teaching behavior will be developed for the Performance Oriented Instruction in Teacher Education program in the College of Education at Michigan State University.

THE INSTRUMENT

The instrument will provide data relative to the nonverbal behavior pattern of the observed. These data may be analyzed for separate categories and the development of a quantitative A/B ratio. This ratio is defined as the relationship between the cluster of categories which signal positive influence by the teacher toward the pupils (A); and the cluster of categories which tend to signal negative influence by the teacher toward the pupils (B).

The instrument is not designed to place a value judgment of what is considered to be appropriate teacher behavior. Use of the analysis sheet, however, should assist the teacher being observed in making such judgments.

Copies of the procedures, the instrument, a definition of categories and the analysis worksheet are attached.

USE OF INSTRUMENT

Permission to reproduce the instrument for research or experimental purposes may be obtained from the developers.

FOCUSED OBSERVATION: NONVERBAL TEACHING BEHAVIOR

DEFINITION OF TABULATION PROCEDURE

A tally is recorded for each distinct, separate nonverbal behavior regardless of frequency. For example, rapid gestures have a separate tally for each gesture. Eye contact representing a shift on focus would have a separate tally for each shift of focus.

The recorder should carefully evaluate the effect of nonverbal behavior as interpreted by the students. Effect of behavior is the key interpretive action by the recorder.

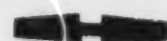
Rapid nonverbal behavior, such as excessive gestures, could become a distractor for students. This would be tabulated in No. 11, Idiosyncrasies.

The focused observation is designed to concentrate on the 14 categories. Other nonverbal behaviors may occur. These may be noted by the recorder.

DEFINITIONS FOR TYPE OF CLASS

1. TEACHER CENTERED ACTIVITY is a lecture, presentation, clarification or a question/answer type of situation.
2. AN INDIVIDUALIZED SITUATION is when students are working independently, usually alone and self-directing.
3. GROUP WORK SITUATION is where students are working in committees. They may be involved in some type of project work requiring a committee report.
4. LEARNING CENTER SITUATION is when students are working independently or in small groups but at specific, designated learning stations. These stations may be math, science, language or topical interest areas.
5. A STUDY PERIOD is when students are engaged in independent work, usually under the direct supervision of the teacher.
6. A DEMONSTRATION SITUATION is a teacher centered situation by use of lab or equipment operation.
7. OTHER situations will require a written description by the recorder.

FOCUSED OBSERVATION: NONVERBAL TEACHING BEHAVIOR
Description of Symbols and Abbreviations

1.		Frowning; facial expressions of disgust, frustration, impatience or exasperation.
2.		The teacher presents a warm, friendly smile or pleasant grin to the class or an individual.
3.		Those facial expressions which are sarcastic, negative, tension creating and tend to discourage pupils from continuing to answer or discuss. Laughter or humor which is at the expense of the class or an individual.
4.		Those facial expressions which are positive, relaxing or tension-breaking and encourage pupils to continue to answer or discuss. Laughter or humor which is not at the expense of someone.
5.		Eye movement avoiding direct eye contact with pupils; looking out a window or at the ceiling, wall or floor. Leaving the impression of not listening, preoccupation or disinterest. Includes a detached appearance of pondering or thoughtfulness.
6.		Eye contact with an individual, group or the class. Eye contact at eye level. Giving the appearance of listening. Looking at pupil when talking or while pupil is talking.
7.		Shaking of the head in a back and forth motion. Signals of disagreement, non-acceptance or disapproval.

8.		Nodding of the head in an up and down fashion. Signals of approval, agreement or acceptance of pupil behavior or statements.
9.	Av	Avoidance. Aloofness or ignoring. Keeping a physical barrier between teacher/pupil. Avoids pupil touch or approach. Body contact which is punitive in nature.
10.	Ap	Approach. Movement toward class or pupil. Circulates among pupils but not to distraction. Body contact which is warm and friendly such as touching pupil to signal approval.
11.	Id	Idiosyncrasies that are usually distracting; such as body movements, excessive manipulation of objects or nervous mannerisms. Unsuitable, inappropriate or incongruent behavior.
12.	G	Gestures which tend to vary the stimuli but are not distracting.
13.	NVC	Nonverbal Control. Moving toward a disturbance. Eye contact in the form of behavior control, such as a stare or glare in the direction of a disturbance. Placing hand on desk of a pupil or physically moving the pupil's chair.
14.	VS	Manipulating the environment or an object which tends to vary the stimuli. May be use of the chalkboard, visual aids or a demonstration.

MICHIGAN STATE UNIVERSITY

College of Education

Division of Student Teaching and Professional Development

Dr. Banks Bradley/Dr. Judd Field

* FOCUSED OBSERVATION: NONVERBAL TEACHING BEHAVIOR-Tally Sheet *

Teacher: _____ Observer: _____

Grade/Subject: _____ Time: _____ Date: _____

Type of Class: _____

1. n		2. u	
3. n̄		4. u̇	
5. 		6. 	
7. 		8. 	
9. Av		10. Ap	
11. Id		12. G	
13. NVC		14. VS	
COMMENTS:			

MINNESOTA STATE UNIVERSITY

College of Education

Division of Student Teaching and Professional Development

Dr. Banks Bradley/Dr. Judd Field

Focused Observation: Nonverbal Teaching Behavior

ANALYSIS WORKSHEET

Category	Total	Per cent of Total
1		
3		
5		
7		
9		

Category	Total	Per cent of Total
2		
4		
6		
8		
10		

11		
13		

12		
14		
Grand Total=		100%

A. Total for categories 2, 4, 6, 8 and 10 = _____

B. Total for categories 1, 3, 5, 7 and 9 = _____

A/B RATIO= _____

Teacher: _____ Observer: _____ Date: _____

COMMENTS:

Selected Bibliography

Nonverbal

- Adams, R. S. "Location as a Feature of Instructional Interaction," Merrill-Palmer Quarterly, 15 (1969): 309-21.
- Amidon, Paul. Nonverbal Interaction Analysis. Minneapolis: P. S. Amidon and Associates, Inc., 1971.
- Andrew, R. J. "The Origins of Facial Expression," Scientific American, 233 (1965): 88-94.
- Andrew, R. J. "Evolution of Facial Expression," Science, 117 (1963): 1034-41.
- Ardrey, R. The Territorial Imperative. New York: Atheneum Press, Inc., 1966.
- Argyle, M. and Dean, J. "Eye Contact, Distance and Affiliation," Sociometry, 28 (1965): 289-304.
- Bakan, P. "The Eyes Have It," Psychology Today, 4 (1971): 64-67, 96.
- Bales, R. Interaction Process Analysis. Reading, Mass. Addison-Wesley, 1950.
- Barker, L. and Collins, N. B. "Nonverbal and Kinesic Research," Methods of Research in Communication, Edited by P. Emmert and W. D. Brooks. Houghton Mifflin, 1970, 343-72.
- Beebe, Steven A., "Eye Contact: A Non-Verbal Determinant of Speaker Credibility," Speech Teacher, 23 (January, 1974): 21-25.
- Birdwhistell, R. L. Expressions of the Emotions in Man. New York: International Universities Press, 1963.
- Birdwhistell, R. L. "Kinesics and Communication," Explorations in Communication, Edited by E. Carpenter and M. McLuhan. Boston: Beacon, 1960.
- Birdwhistell, R. L. "Some Body Motion Elements Accompanying Spoken American English," Communications: Concepts and Perspectives, Edited by L. Thayer, Washington, D. C.: Spartan Books, 1967, 53-76.
- Bosmajian, H., ed., The Rhetoric of Nonverbal Communication. Glenview, Ill.: Scott-Foresman, 1971.
- Brannigan, C. R. and Humphries, D. A. "Human Non-verbal Behavior: A Means of Communication," Ethological Studies of Infant Behavior, Edited by N. Burton-Jones, Cambridge University Press, 1971.

Selected Bibliography

Nonverbal (Continued)

- Breed, George and Victoria Colaiuta, "Looking, Blinking, and Sitting Nonverbal Dynamics In the Classroom" Journal of Communication, 24 (Spring, 1974): 75-81.
- Burns, T. "Nonverbal Communication" Discovery, October, 1964, 31-35.
- Darwin, Charles. The Expression of Emotions in Man and Animals. London: John Murray, 1872. Reprint. Chicago: University of Chicago Press, 1965.
- D'Augelli, Anthony R. "Nonverbal Behavior of Helpers in Initial Helping Interactions," Journal of Counseling Psychology, 21 (September, 1974): 360-63.
- Davitz, J. R. The Communication of Emotional Meaning. New York: McGraw-Hill, 1964.
- Davitz, J. and Davitz, L. "Nonverbal Vocal Communication of Feeling," Journal of Communication, 11 (1961), 81-86.
- Deutsch, F. "Analysis of Postural Behavior," Psychoanalytic Quarterly, 16 (1947), 195-213.
- Dittman, A. T., Parloff, M. B. and Boomer, D. S. "Facial and Bodily Expression: A Study of Receptivity of Emotional Cues," Psychiatry, 28 (1965), 239-44.
- Dittman, A. and Llewellyn, L. G. "Body Movement and Speech Rhythm in Social Conversation," Journal of Personality and Social Psychology, 11 (1969), 98-106.
- Dittman, A. "Review of Kinesics in Context," Psychiatry, 34 (1971), 334-42.
- Dosey, M. and Meisels, M. "Personal Space and Self Protection," Journal of Personality and Social Psychology, 11 (1969), 93-97.
- Duncan, S. "Nonverbal Communication," Psychological Bulletin No. 72 (1969), 118-37.
- Duvall, E. N. Kinesiology: The Anatomy of Motion. Englewood Cliffs, N. J.: Prentice-Hall, 1959.
- Efron, D. Gesture and Environment. New York: King's Crown Press, 1941.
- Ekman, P. and Friesen, C. W. "The Repertoire of Nonverbal Behavior: Categories, Origins, Usage, and Coding," Semiotica, 1 (1969), 49-98.

Selected Bibliography

Nonverbal (Continued)

- Ekman, P., ed. Darwin and Facial Expression. New York: Academic Press, 1972.
- Ekman, P. "VID-R and SCAN: Tools and Methods in the Analysis of Facial Expression and Body Movement," Content Analysis, Edited by G. Gerbner and others, New York: Wiley Press, 1969.
- Ekman, P. "Constants Across Cultures in the Face and Emotion," Journal of Personality and Social Psychology, 17 (1971), 124-29.
- Ekman, P. "A Methodological Discussion of Nonverbal Behavior," Journal of Psychology, 53 (1957), 141-49.
- Ekman, P. and Friesen, W. V. "Nonverbal Leakage and Clues to Deception," Psychiatry, 32 (1969), 88-106.
- Fast, Julius. Body Language. New York: M. Evans and Co., 1970.
- Felipe, N. J. and Sommer, R. "Invasions of Personal Space," Social Problems, 14 (1966), 206-14.
- Fischhoff, J. "Family Disturbances and Children's Nonverbal Behavior," Medical Times, 44 (1966), 151-56.
- Flanders, Ned A., "Basic Teaching Skills Derived from a Model of Speaking and Listening," Journal of Teacher Education, 24 (Spring, 1973): 24-37.
- Frahm, J. "Verbal-Nonverbal Interaction Analysis: Exploring a New Methodology for Quantifying Dyadic Communication Systems." (Unpublished doctoral dissertation, 1970) East Lansing, Mich.: Michigan State University.
- Galloway, Charles M. "Nonverbal: The Language of Sensitivity," Theory Into Practice, 13 (December, 1974): 380-83.
- Galloway, Charles. "Nonverbal Communication," Studying Teaching, Edited by James Rath and others. Englewood Cliffs, N.J.: Prentice-Hall, Inc., (1971).
- Geldhard, F. A. "Body English," Psychology Today, 2 (1968: 42-47.
- Gibson, J. J. and Pick, A. D. "Perception of Another Person's Looking Behavior," American Journal of Psychology, 76 (1963), 386-94.
- Goldberg, Gale and Kathleen Kubiniec Mayerberg, "Emotional Reactions of Students to Nonverbal Teacher Behavior", Journal of Experimental Education, 42 (Fall 1973): 29-32.

Selected Bibliography

Nonverbal (Continued)

- Guardo, C. J. "Personal Space in Children," Child Development, 40 (1969): 145-51.
- Haase, Richard F. and Donta T. Tepper, "Nonverbal Components of Empathic Communication" Journal of Counseling Psychology, 19: 417-24.
- Hackney, Harold, "Facial Gestures and Subject Expression of Feelings", Journal of Counseling Psychology, 21 (May 1974): 173-78.
- Hall, Edward T. The Hidden Dimension. New York: Doubleday, 1966.
- Hall, E. T. "A System for the Notation of Proxemic Behavior," American Anthropologist, (1963), 1003-26).
- Hall, E. The Silent Language. Garden City, N. Y.: Doubleday, (1959).
- Harris, Thomas E. and Robert M. Smith, "An Experimental Verification of Schelling's Tactic Communication Hypothesis", Speech Monographs, 41 (March 1974): 82-84.
- Harrison, R. "Nonverbal Communication: Exploration Into Time Space, Action, and Object," Dimensions in Communication, Edited by J. Campbell and H. Helper. Belmont, Calif.: Wadsworth and Co., (1965): 158-74.
- Horowitz, M. J. "Human Special Behavior," American Journal of Psychotherapy, 14 (1965), 20-28)
- Kachur, Donald S., and Bruce W. Sweet, "Nonverbal Discipline," School and Community, 60 (April 1974): 31.
- Keith, Thomas, Louis G. Tornatzky and L. Eudora Pedigrew, "An Analysis of Verbal and Nonverbal Classroom Teaching Behaviors". The Journal of Experimental Education, 42:(Summer 1974): 30-38.
- Kendon, A. "Some Relationships Between Body Motion and Speech," Studies in Dyadic Communication, Edited by A. W. Siegman and B. Pope, New York: Pergamon Press, 1971.
- Kleck, R. "Physical Stigma and Nonverbal Cues Emitted in Face-to-Face Interaction," Human Relations, 21 (1968), 19-28.
- Knapp, Marl L. Nonverbal Communication in Human Interaction. New York: Holt, Rinehart and Winston, Inc., 1972.
- Koivumaki, Judith Hall, "Body Language Taught Here," Journal of Communication, 25 (Winter 1975): 26-30.

Selected Bibliography

Nonverbal (Continued)

- Krout, M. "An Experimental Attempt to Determine the Significance of Unconscious Manual Symbolic Movements," Journal of General Psychology, 51 (1954): 121-52.
- LaBarre, W. "Paralinguistics, Kinesics, and Cultural Anthropology, Approaches to Semiotics, Edited by T. A. Sebeok and others. The Hague: Mouton, (1964): 191-220.
- LaBarre, W. "The Cultural Basis of Emotions and Gestures," Journal of Personality, 16 (1947): 49-68.
- Lamb, W. Posture and Gesture. London: Gerard Duckworth and Co., (1965).
- Ling, Daniel and Agnes H. Ling, "Communication Development in the First Three Years of Life", Journal of Speech and Hearing Research, 17: (March 1974): 146-159.
- Little, K. B. "Personal Space," Journal of Experimental Social Psychology, I (1965) 237-47.
- Llewellyn, T. E. "Movements of the Eye," Scientific American, 219 (1968): 88-95.
- Loftland, J. Analyzing Social Settings. Belmonte, Calif.: Wadsworth, 1971.
- Loss, Suzanne Perry, "Nonverbal Behavior of Teachers and Students", American Vocational Journal, 48 (December 1973): 23-24.
- Mahl, G. and others. "Reflection of Major Personality Characteristics In Gestures and Body Movements," American Psychologist, 7 (1959): 357.
- McGaffey, Ruth, "What Every Teacher Should Know About Symbolic Speech", English Journal, 64: (March 1975): 18-19.
- Mehrabian, A. "Communication Without Words," Psychology Today, 2 (September 1968): 53-55.
- Mehrabian, A. Silent Messages. Belmonte, Calif.: Wadsworth, 1971.
- Mehrabian, A. "Methods and Designs: Some Referents of Nonverbal Behavior," Behavioral Research Methods and Instrumentation, 1 (1969): 203-7.
- Mehrabian, A. "Orientation Behaviors and Nonverbal Attitude Communication," Journal of Communication, 17 (1967): 324-32.
- Meisels, M. and Guardo, C. "Development of Personal Space Schemata," Child Development, 40 (1969):

Selected Bibliography

Nonverbal (Continued)

- Michael, G. and Willis, N. "The Development of Gestures as a Function of Social Class, Education, and Sex," Psychological Record, 17 (1958): 515-19.
- Mon, Gordon R., "Nonverbal Teaching", Mathematics Teacher, 67: (February 1974): 172-74.
- Patterson, M. "Special Factors in Social Interaction," Human Relations, 21 (1968): 351-61.
- Reece, M. and Whitman, R. "Expressive Movements, Warmth, and Verbal Reinforcement," Journal of Abnormal and Social Psychology, 64 (1962): 234-36.
- Riemer, M. D. "Abnormalities of the Gaze-A Classification," Psychiatric Quarterly, 29 (1955): 659-72.
- Rosenberg, B. G. and Langer, J. "A Study of Postural-Gestural Communication," Journal of Personality and Social Psychology, 2 (1965): 593-97.
- Ruesch, J. and Kees, W. Nonverbal Communication: Notes on the Visual Perception of Human Relations. Berkeley and Los Angeles: University of California Press, (1956).
- Savitsky, Jeffrey C. and Marguerite E. Sim. "Trading Emotions, Equity Theory of Reward & Punishment". Journal of Communication, 24 (Summer 1974): 140-46.
- Schefflen, A. E. "The Significance of Posture in Communication Systems," Psychiatry, 27 (1964): 316-31.
- Shapiro, J. G. "Responsivity to Facial and Linguistic Cues," Journal of Communication, 17 (1968): 11-17.
- Sommer, R. Personal Space. Englewood Cliffs, N. J.: Prentice-Hall, 1969.
- Thompson, James J. Beyond Words: Nonverbal Behavior in the Classroom. New York: Citation Press, 1973.
- Vine, I. "Communication by Facial-Visual Signals," Social Behavior in Animals and Men, Edited by J. H. Cook, New York: Academic Press, 1969.
- Watson, O. M. and Graves, T. D. "Quantitative Research in Proxemic Behavior," American Anthropologist, 68 (1966): 971-85.
- Williams, F. and Tolch, J. "Communication by Facial Expression," Journal of Communication, 15 (1965): 17-27.

Selected Bibliography

Nonverbal (Continued)

Woolfolk, Anita E. and Robert W. Woolfolk, "Student Self-Disclosure In Response to Teacher Verbal and Non-Verbal Behavior", Journal of Experimental Education, 44: (Fall 1975): 36-40.

Woolfolk, Robert L. and Anita E. Woolfolk. "Effects of Teacher Verbal and Nonverbal Behaviors on Student Perceptions and Attitudes", American Educational Resource Journal. 11: (Summer 1974): 297-303.

Selected Bibliography

Verbal

- Abraham, Michael R. & Dorothy M. Schlitt, "Verbal Interaction: A Means For Self-Evaluation", School, Science and Mathematics, 73 (November 1973): 678-86.
- Amidon, Edmund and Hough, John. Interaction Analysis: Theory, Research and Application. Reading, Mass.: Addison-Wesley Publishing Co., 1967.
- Amidon, E. J. and Hunter, Elizabeth. Improving Teaching: The Analysis of Classroom Verbal Interaction. New York: Holt, Rinehart and Winston, Inc., 1966.
- Amidon, E. and Giamatteo, M. C. "The Behavior of Superior Teachers," The Elementary School Journal, 65 (February 1965): 283-85.
- Amidon, E. and Flanders, Ned A. "The Effects of Direct and Indirect Teacher Influence on Dependent-Prone Students Learning Geometry," Journal of Education Psychology, 52 (1961): 286-91.
- Amidon, E. and Flanders N. The Role of the Teacher in the Classroom. Minneapolis: P. S. Amidon and Associates, Inc., 1963.
- Amidon, E. "Analysis Techniques and Teaching," Partnership in Education, Edited by E. Brooks Smith. AACTE Yearbook, 1968.
- Amidon, E. "Interaction Analysis," Methods of Research in Communication, Edited by P. Emmert and W. D. Brooks. Boston: Houghton Mifflin, 1970.
- Anderson, H. "The Measurement of Domination and of Socially Integrative Behavior in Teachers' Contacts with Children," Child Development, 10 (1939): 73-89.
- Aspy, David N. and Flora N. Roebuck & Bob Black. "The Relationship of Teacher Offered Conditions of Respective Behaviors Described by Flanders Interaction Analysis", Journal of Negro Education, 41 (Fall 1972): 370-76.
- Aspy, David N. & Barbara Hudson, "Promotion of Student Success", Journal of Educational Research, 66 (October 1972): 57-60.
- Beam, Catherine J. and Robert E. Horvat, "Differences Among Teachers' and Students' Perceptions of Science Classroom Behaviors, and Correctional Classroom Behaviors", Science Education, 59 (July 1975): 333-44.
- Blue, C. Milton, "Teacher Judgment of Verbal Interaction," Exceptional Children, 40 (September 1973): 42-44.

Selected Bibliography

Verbal (Continued)

- Bradley, Banks and Field, J. F. Analysis of Teaching Behavior. CBTE Module, East Lansing, Mich.: MSU College of Education, 1975.
- Dieken, Earl H. and Raymond B. Fox, "Self Perception of Teachers and Their Verbal Behavior in the Classroom, Education Leadership, 30 (February 1973): 445-49).
- Emmer, Edmond T. and Thomas D. Oakland, and Thomas L. Good, "Do Pupils Affect Teachers' Styles of Instruction?", Educational Leadership, 31 (May 1974): 700-04.
- Field, J. F. "Interaction Analysis as a Method of Systematic Observation," Teaching in a Competency-Based Program, Edited by Donald Chase and Margaret Ishler, Dubuque, Iowa: Kendall/Hunt Publishing Co., 1975.
- Flanders, Ned A., "Basic Teaching Skills Derived from a Model of Speaking and Listening", Journal of Teacher Education, 24 (Spring 1973): 24-37.
- Flanders, Ned A. Teacher Influence, Pupil Attitudes and Achievement. Cooperative Research Monograph No. 12, Office of Education, U. S. Dept. of Health, Education and Welfare, Washington, D.C.: Government Printing Office, 1965.
- Flanders, N. Analyzing Teaching Behavior, Reading, Mass.: Addison-Wesley Publishing Co., 1970.
- Gade, Eldon and Ernest Matuschka, "Effects of the Verbal Interaction Analysis Training with Counseling Practicum Students", Counselor Education and Supervision, 12 (March 1973): 184-89.
- Gay, Geneva, "Exploring Verbal Interaction in Desegregated Classrooms", Educational Leadership, 31 (May 1974): 725-30.
- Gibson, James W. and John A. Kline, "Computer Analysis of Verbal Behavior in the Classroom", Speech Teacher, 22 (January 1973): 58-63.
- Johns, J. P. "The Relationship Between Teacher Behavior and the Incidence of Thought-Provoking Questions by Students in Secondary Schools," Journal of Educational Research, 62 (1968), 117-22.
- Keith, Thomas, Louis G. Tornatzky and L. Eudora Pedigrew. "An Analysis of Verbal and Non-Verbal Classroom Teaching Behaviors." The Journal of Experimental Education, 42 (Summer 1974): 30-38.
- Kline, Charles E. and Dennis H. Sorge, "How Effective Is Interaction Analysis Feedback on the Verbal Behavior of Teachers?" Educational Leadership, 32 (October 1974): 55-74.

Selected Bibliography

Verbal (Continued)

- Ling, Daniel and Agnes H. Ling, "Communication Development in the First Three Years of Life", Journal of Speech and Hearing Research, 17 (March 1974): 146-59.
- Lippitt, R. and White, R. K. "The 'Social Climate' of Children's Groups." Child Behavior and Development, Edited by R. G. Barker and others, New York: McGraw-Hill, 1949, 458-508.
- Measel, Wes and Darlene W. Mood, "Teacher Verbal Behavior and Teacher and Pupil Thinking Elementary School", The Journal of Educational Research, 66 (November 1972): 99-102.
- Medley, D. M. and Mitzel, H. E. "Some Educational Correlates of Teacher Effectiveness," Journal of Educational Psychology, 50 (1959): 239-46.
- Moskowitz, Gertrude and John L. Hayman, Jr., "Interaction Patterns of First Year Typical and Best Teachers in Inter-City Schools", The Journal of Educational Research, 67 (January 1974): 224-30.
- Nygaard, Garry, "Interaction Analysis of Physical Education Classes", Research Quarterly, 46 (October 1975): 351-57.
- Perkins, H. V. "Climate Influences Group Learning," Journal of Educational Research, 45 (October 1951): 115-19.
- Racioppo, Vincent and Pietro J. Pascale, Gaven Doughty, Jr., "A FORTRAN Program For Analyzing the Results of Flanders Interaction Matrix: An Up-Dated Version", Educational and Psychological Measurement, 35 (Winter 1975): 73-74.
- Sayer, Irwin and James Read Campbell and Cyrus W. Barnes, "The Effect of College Instructors' Interaction Ratios on Cognitive Development," Science Education, 56 (October 1972): 529-37.
- Stouwie, Roger J. "An Experimental Study of Adult Dominance and Warmth, Conflicting Verbal Instructions, and Children's Moral Behavior", Child Development, 43 (September 1973): 959-71.
- Woolfolk, Anita E. and Robert L. Woolfolk "Student Self-Disclosure In Response to Teacher Verbal and Non-Verbal Behavior", Journal of Experimental Education, 44 (Fall 1957): 36-40.
- Woolfolk, Robert L. and Anita E. Woolfolk. "Effects of Teacher Verbal and Non-Verbal Behaviors on Student Perceptions and Attitudes", American Educational Resource Journal, 11 (Summer 1974): 297-303.